**Amendments to the Claims:**

This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:**

1-55. (CANCELED)

56. (NEW) A method of judging a biological activity in an environment contaminated with an organochlorine compound that is at least one of tetrachloroethylene (PCE) and trichloroethylene (TCE), the method comprising:

amplifying a nucleic acid extracted from an environmental sample by a gene amplification method so as to use the amplified product as a target;

hybridizing the target to at least one DNA probe including a base sequence unique to at least one of 17 types of anaerobic bacteria denoted below as A to Q, which are related to degradation of the organochlorine compound, so as to detect the at least one of 17 types of bacteria in the environment; and

judging capability of the environment to eliminate the organochlorine compound based on degrading capability of the each of 17 types of bacteria that is detected with respect to the organochlorine compound and a dechlorinated product thereof,

wherein the at least one DNA probe includes at least one of 87 types of DNA probes, each of which is specific to any one of the 17 types of bacteria denoted below as A to Q, and each of the 87 types of DNA probes has any one of base sequences described below in (1) to (4):

(1) A base sequence represented by each of SEQ ID NOS: 19 to 105 of the Sequence Listing.

(2) A base sequence obtained by deletion, substitution or insertion of one to several bases in the base sequence described in (1) and is hybridizable to a complementary sequence of the base sequence described in (1) under a stringent condition.

(3) A base sequence obtained by deletion, substitution or insertion of one to several bases in the base sequence described in (1) and has a homology of 90% or higher with the base sequence described in (1).

(4) A base sequence complementary to each of the base sequences described in (1) to (3).

A: Dehalospirillum multivorans

B: Desulfitobacterium frappieri

C: Actinomycetales Sm-1 (Rhodococcus sp. Sm−1)

D: Rhodococcus rhodococcus

E: Xanthobacter flavus

F: Mycobacterium L1

G: Desulfomicrobium norvegicum (Desulfovibrio baculatus)

H: Desulfitobacterium dehalogenans

I: Desulfitobacterium hafniense

J: Clostridium formicoaceticum

K: Desulfuromonas chloroethenica

L: Acetobacterium woodii DSM 1030

M: Dehalobacter restrictus

N: Desulfitobacterium sp. strain PCE1

O: Desulfitobacterium frappieri TCE1

P: Acetobacterium woodii DSM 2396

Q: Desulfomonile tiedjei DCB−1.

57. (NEW) The method according to claim 56 comprising detecting at least two of the 17 types of bacteria at the same time using at least two of the 87 types of DNA probes.

58. (NEW) The method according to claim 56 comprising detecting the 17 types of bacteria at the same time using at least 17 of the 87 types of DNA probes.

59. (NEW) The method according to claim 56

wherein the gene amplification method with respect to the nucleic acid uses as a sense primer, a primer that contains a polynucleotide comprising a base sequence

represented by SEQ ID NO: 116 of the Sequence Listing, and as an antisense primer, a primer that contains a polynucleotide comprising a base sequence represented by SEQ ID NO: 117 of the Sequence Listing.

60. (NEW) The method according to claim 56

wherein the contaminated environment is selected from a group consisting of soil, groundwater, pond water and seawater.

61. (NEW) A bioremediation method with respect to an environment contaminated with an organochlorine compound that is at least one of PCE and TCE, the method comprising steps of:

judging a biological activity in the environment by the method according to claim 56; and

stimulating, when a bacterium related to degradation of the organochlorine compound is detected, growth and/or an activity of the bacterium so as to enhance the degradation of the organochlorine compound or a dechlorinated product of the organochlorine compound.

62. (NEW) A bioremediation method with respect to an environment contaminated with an organochlorine compound that is at least one of PCE and TCE, the method comprising steps of:

judging a biological activity in the environment by the method according to claim 56; and

adding at least one of types of bacteria related to degradation of the organochlorine compound other than a detected bacterium to the environment so as to enhance the degradation of the organochlorine compound or a dechlorinated product of the organochlorine compound.

63. (NEW) A device for detecting the bacteria used in the method according to claim 56 comprising at least one of the 87 types of DNA probes.

64. (NEW) The device according to claim 63,

wherein at least two of the 87 types of DNA probes are included, and at least two of the 17 types of bacteria can be detected at the same time.

65. (NEW) The device according to claim 64,

wherein at least 17 of the 87 types of DNA probes are included, and the 17 types of bacteria can be detected at the same time.

66. (NEW) A DNA microarray that is used in the method according to claim 56 comprising a substrate on which at least one of the 87 types of DNA probes is immobilized.

67. (NEW) The DNA microarray according to claim 66,

wherein at least two of the 87 types of DNA probes are immobilized, and at least two of the 17 types of bacteria can be detected at the same time.

68. (NEW) The DNA microarray according to claim 67,

wherein at least 17 of the 87 types of DNA probes are immobilized, and the 17 types of bacteria can be detected at the same time.

69. (NEW) A kit for detecting the bacteria used in the method according to claim 56 comprising:

at least one of the 87 types of DNA probes; and

a primer for gene amplification and a reagent for gene amplification that are used for preparing a target to be hybridized to the at least one of the 87 types of DNA probes so as to be detected.

70. (NEW) The kit according to claim 69,

wherein at least two of the 87 types of DNA probes are included.

71. (NEW) The kit according to claim 69,

wherein at least 17 of the 87 types of DNA probes are included.

72. (NEW) A kit for detecting the bacteria used in the method according to claim 56 comprising:

a DNA microarray comprising a substrate on which at least one of the 87 types of DNA probes is immobilized; and

a primer for gene amplification and a reagent for gene amplification that are used for preparing a target to be hybridized to the at least one of the 87 types of DNA probes so as to be detected.

73. (NEW) A polynucleotide that can be used as a DNA probe for detecting a bacterium related to degradation of an organochlorine compound in the method according to claim 56 the polynucleotide being any one of types of polynucleotides described below in (1) to (4):

(1) A polynucleotide comprising any one of base sequences represented by SEQ ID NOS: 1 to 17 of the Sequence Listing and SEQ ID NOS: 19 to 105 of the Sequence Listing, respectively.

(2) A polynucleotide comprising a base sequence obtained by deletion, substitution or insertion of one to several bases in the base sequence of the polynucleotide described in (1), which is hybridizable to a polynucleotide comprising a base sequence complementary to the polynucleotide described in (1) under a stringent condition.

(3) A polynucleotide comprising a base sequence obtained by deletion, substitution or insertion of one to several bases in the base sequence of the polynucleotide described in (1), which has a homology of 90% or higher with the polynucleotide described in (1).

(4) A polynucleotide comprising a base sequence complementary to any one of the polynucleotides described in (1) to (3).